

CLAIMS

1. A vaccine comprising an immunogenic amount of a protein of 17 kDa as determined by SDS PAGE encoded by one of SEQ ID NO: 1, SEQ ID NO:3, or SEQ ID NO: 5, with or without an adjuvant, for administering either intraperitoneally, by immersion, or orally or by any other combination of routes to a poikilothermic fish for protecting a poikilothermic fish against infection by the bacterial pathogen *Piscirickettsia salmonis*.
2. The vaccine of claim 1, wherein said protein is post-translationally modified into a lipoprotein.
3. The vaccine of claim 1, wherein said protein is fused to at least one other protein or protein fragment either at the N or C terminus or both.
4. A vaccine comprising an immunogenic amount of a protein of 16 kDa as determined by SDS PAGE, said protein comprising an amino acid sequence of one of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO:6 with or without an adjuvant, for administering either intraperitoneally, by immersion, or orally or by any other combination of routes to a poikilothermic fish for protecting a poikilothermic fish against infection by the bacterial pathogen *Piscirickettsia salmonis*.
5. The vaccine of claim 4, wherein said protein or variants thereof are post-translationally modified into a lipoprotein.
6. The vaccine of claim 4, wherein said protein is fused to at least one other protein or protein fragment either at the N or C terminus or both.

7. A method of protecting a poikilothermic fish against infection by the bacterial pathogen *Piscirickettsia salmonis* comprising administering a vaccine comprising an immunogenic amount of a protein of 17 kDa as determined by SDS PAGE encoded by one of SEQ ID NO: 1, SEQ ID NO: 3, or SEQ ID NO: 5 with or
5 without an adjuvant to a poikilothermic fish either intraperitoneally, by immersion, or orally or by any other combination of routes.

8. The method of claim 7 wherein said protein is post-translationally modified into a lipoprotein.
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9. The method of claim 7, wherein said protein is fused to at least one other protein or protein fragment either at the N or C terminus or both.

10. A method of protecting a poikilothermic fish against infection by the
15 bacterial pathogen *Piscirickettsia salmonis* comprising administering a vaccine comprising an immunogenic amount of a protein of 16 kDa as determined by SDS PAGE, said protein comprising the amino acid sequence of one of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 with or without an adjuvant to a poikilothermic fish either intraperitoneally, by immersion, or orally or by any other combination of routes.
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11. The method of claim 10 wherein said protein is post-translationally modified into a lipoprotein.

12. The method of claim 10, wherein said protein is fused to at least one
25 other protein or protein fragment either at the N or C terminus or both.